

REMARKS

This is a full and timely response to the outstanding Office Action mailed August 14, 2006. The Office Action rejected independent claim 38 under 35 U.S.C. § 102 as allegedly anticipated by U.S. patent 6,294,831. In response, Independent claim 38 has been amended. Claims 38, 39-52, and 55-56 remain pending in this application.

Applicant has amended independent claim 38 to more particularly define a novel and non-obvious feature of embodiments of the claimed invention. Specifically, claim 38 recites, among other distinguishing features, the limitations of “the slots arrange in the pattern comprising the pattern selected from the group consisting of a concentric circular pattern and a concentric octagonal pattern”. Support for this limitation can be found on Figs. 3A through 3G of the original application. Accordingly, the amendment adds no new matter to the application. This amendment narrows the claim by excluding certain previously defined patterns from the grouping of possible patterns. Simply stated, these patterns are not disclosed in the cited reference, and therefore claim 38 defines over that reference for at least this reason.

Claim Objections

Claim 38 is objected to because of the informalities listed in page 2, lines 4-5 of the Office Action. In response, claim 38 has been amended as suggested by the Examiner. Therefore, this claim objection is considered to be moot.

35 U.S.C. 102

Claims 38 and 49-50 stand rejected under 35 U. S. C. 102(b) as allegedly anticipated by *Shishido* et al. (US 6,294,831)

In this regard, the Office Action asserts *Shishido* et al. teach the slots are arranged in the pattern comprising the pattern selected from the group consisting of: a circular pattern, a radiating pattern, rectangular pattern (cover fig., column 4, lines 53-58).

With respect to independent claim 38, that claim has been amended to recite:

38. A ball grid array package, comprising:
a semiconductor chip/die affixed to a ball grid substrate; the ball grid substrate having a series of balls; and
a heat spreader mounted to the semiconductor clip/die and the ball grid substrate opposite the series of balls; the heat spreader having a pattern of slots, not completely piercing the heat spreader, therein, ***the slots arrange in the pattern comprising the pattern selected from the group consisting of a concentric circular pattern and a concentric octagonal pattern***.

(*Emphasis Added*).

The Examiner is acknowledged that the cover Figure and Fig. 5(a) of *Shishido* are cross-sections, which cannot clearly define the pattern arranged by openings disclosed by *Shishido* et al. In Col. 4, lines 53-58, *Shishido* et al. disclose shapes of the openings 48 and 44, and the openings arrange in a grid and zigzag, but do not teach or otherwise disclose the limitations emphasized above in claim 38.

Thus, Applicant respectfully asserts that the cited art is deficient for the purpose of anticipating claim 38. In particular, Applicant respectfully asserts that that cited art does not teach or otherwise disclose at least the limitations emphasized above in claim 38. Therefore, for at least this reason, independent claim 38 is in condition for allowance.

Since claims 39 – 52 and 55 - 56 are dependent claims that incorporate the limitations of claim 38, Applicant respectfully asserts that these claims also are in condition for allowance. Additionally, these claims recite other limitations that serve as an independent basis for patentability.

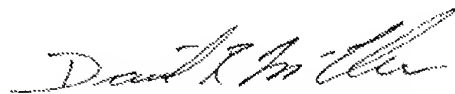
CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this Amendment and Response. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

By:



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